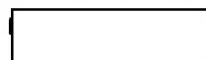




NATIONAL PHOTOGRAPHIC
INTERPRETATION CENTER

BASIC IMAGERY
INTERPRETATION
REPORT

FAUSTOVO ROCKET ENGINE TEST FACILITY



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STRATEGIC WEAPONS INDUSTRIAL FACILITIES
USSR



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INSTALLATION OR ACTIVITY NAME		COUNTRY	
Faustovo Rocket Engine Test Facility		UR	25X1
UTM COORDINATES NA	GEOGRAPHIC COORDINATES 55-27-40N 038-31-52E	CATEGORY	NUETR NO. 25X1
MAP REFERENCE			

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ACIC. US Air Target Chart, Series 200, Sheet 0167-5, scale 1:200,000 (SECRET)

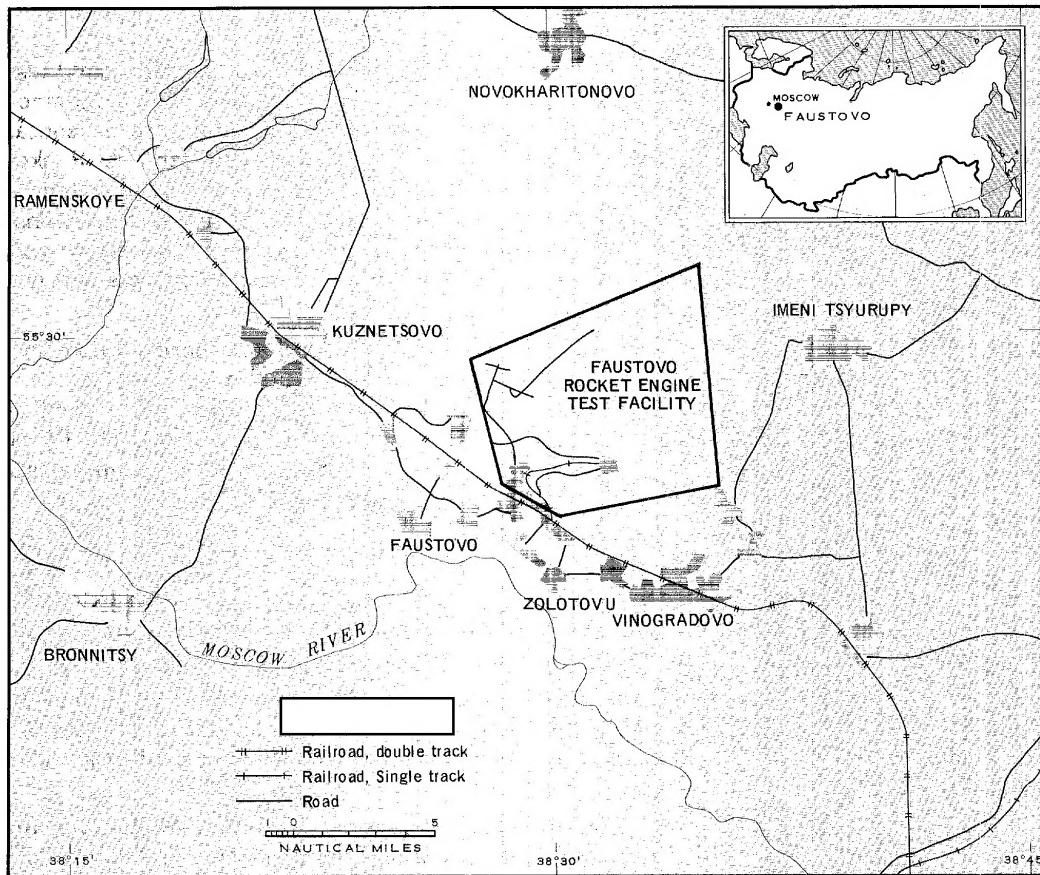
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ABSTRACT

1. Faustovo Rocket Engine Test Facility is a diverse testing center consisting of four separate testing areas. These are the assembly and test area, static test pads, rocket sled track, and ballistics test ranges. Total operational roof cover for Faustovo is 60,946 square meters (743,460 square feet).

2. Faustovo has the apparent capability to conduct static and nonstatic tests of both solid propellant rocket motors and liquid propellant rocket engines. Additionally, support systems such as parachutes, ejector systems, guidance components, and non-rocket propelled munitions could be tested at Faustovo.

3. The presence of facilities to test both rocket motors and engines in one installation is unusual in the Soviet Union, where separate facilities have been developed for rocket motor and engine development and testing. The diverse types of testing capabilities available and the limited engineering space present suggest that the facility is not involved in basic research, but rather is tasked with the application of known technology to a particular field of weaponry.



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FIGURE 1. LOCATION OF FAUSTOVO ROCKET ENGINE TEST FACILITY, USSR.

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4. This report is based on [] photography and supersedes all previous NPIC reports on the subject facility. The report contains graphic presentations and textual discussion of all areas of the facility.

INTRODUCTION

5. Faustovo Rocket Engine Test Facility is a diversified development and testing center situated in a flat and densely wooded area 15 nautical miles (nm) southeast of Ramenskoye and approximately 35 nm southeast of the center of Moscow (Figure 1). It has extensive testing capabilities and could, therefore, be functionally related to a large number of Moscow area aerospace facilities. Included among these are Ramenskoye Central Aerohydrodynamic Institute [] Ramenskoye Flight Test Center (BE []) Moscow Space Research Facility Tomilino [] and Krasnoarmeysk Solid Motor Development Facility []

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BASIC DESCRIPTION

6. Faustovo Rocket Engine Test Facility contains four separate areas which provide extensive testing capabilities. These areas are the assembly and test area, static test pads, ballistics test ranges, and rocket sled test track (Figure 2).

7. Faustovo has the apparent capability to conduct tests of both solid propellant rocket motors, liquid propellant rocket engines, and conventional weaponry. The rocket sled test track provides a means for various types of testing including propulsion units; support systems, such as parachutes and ejector systems; guidance components, structural testing, and others.

8. Total operational roof cover for Faustovo is [] feet).

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Assembly and Test Area

9. At least one, and possibly four, test structures are located in the assembly and test area (Figures 2 and 3). A horizontal test building (item 17, Figure 3) has been present since the facility was first observed in []. This building is of a design similar to horizontal test buildings at Ufa Rocket Engine Test Facility [], Izhevsk Rocket Engine/Components Test Facility [], and Nizhnyaya Salda Rocket Engine Test Facility []. The Faustovo test building probably has four test positions. A protective barricade is to the rear of the building, a feature seen only at Faustovo and Izhevsk. The horizontal test building probably is used to test relatively small liquid propellant rocket engines.

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10. Also present since Faustovo was first observed is a probable horizontal rocket motor (solid propellant) test structure (item 47, Figure 3). This building compares closely in length with the firing portion of the type B test cell at Biysk Rocket Motor Test Facility []. The Faustovo building is []. The Biysk test cell measures []. The identification of this building as a rocket motor test structure is further supported by the presence of a barricade north of the building, the primary access to the firing end of the building, and the presence of a building (item 46, Figure 3) which appears to serve as a control building.

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11. In 1964 construction began on a series of buildings connected by an extensive system of pipelines. The wide diameter of the pipelines and the numerous right-angle bends in the system indicate the system was designed to carry gaseous materials only.

12. At two terminal points of the pipeline system are blower houses (items 1 and 44, Figure 3). The interconnected series of buildings may include two structures: a possible components test building (item 42, Figure 3) and a possible cold flow or calibration test stand (item 11, Figure 3).

13. The possible components test building has two sections. Towers or stacks make up a narrow section traversing the width of the building along the western end. This narrow

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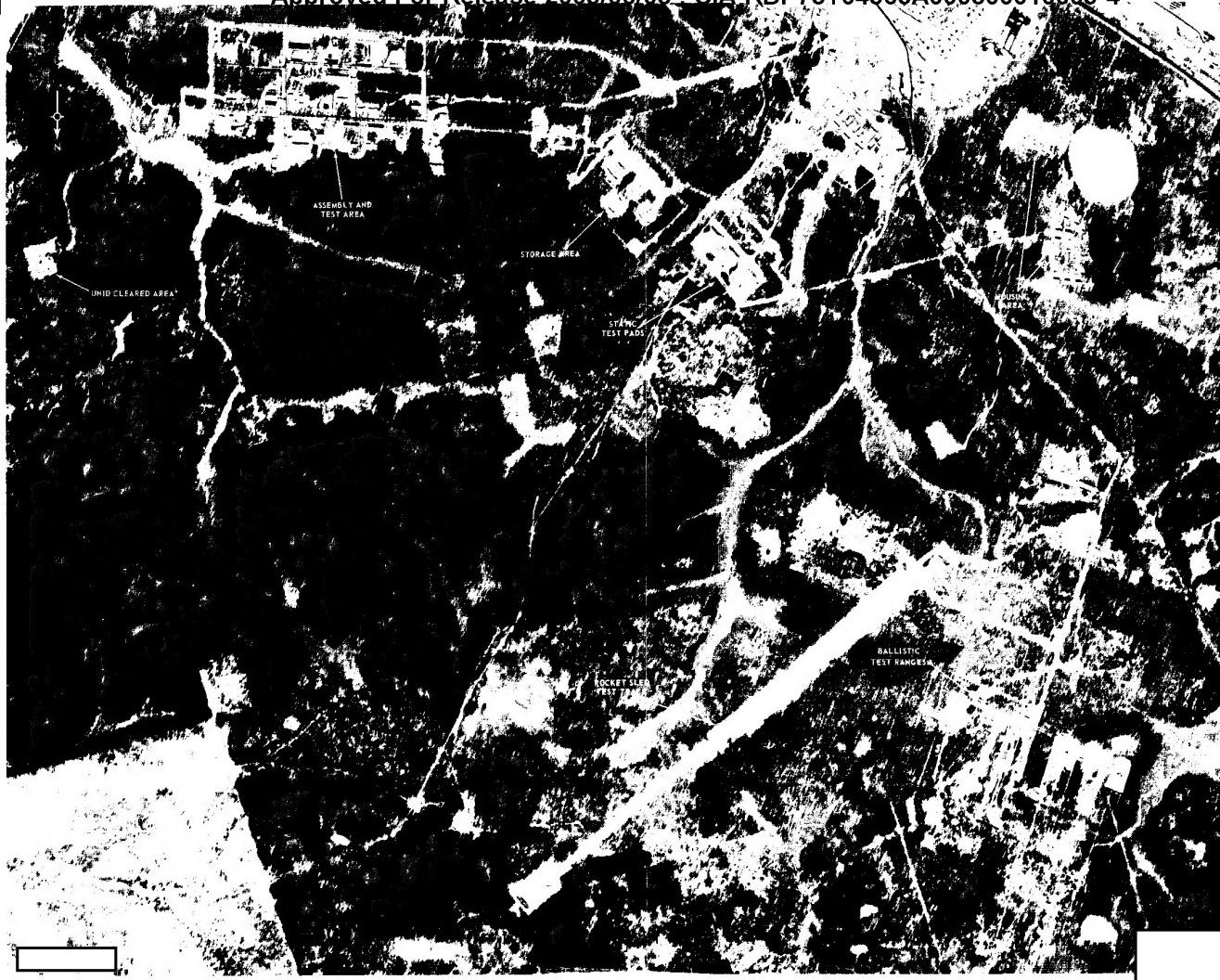


FIGURE 2. FAUSTOVO ROCKET ENGINE TEST FACILITY.

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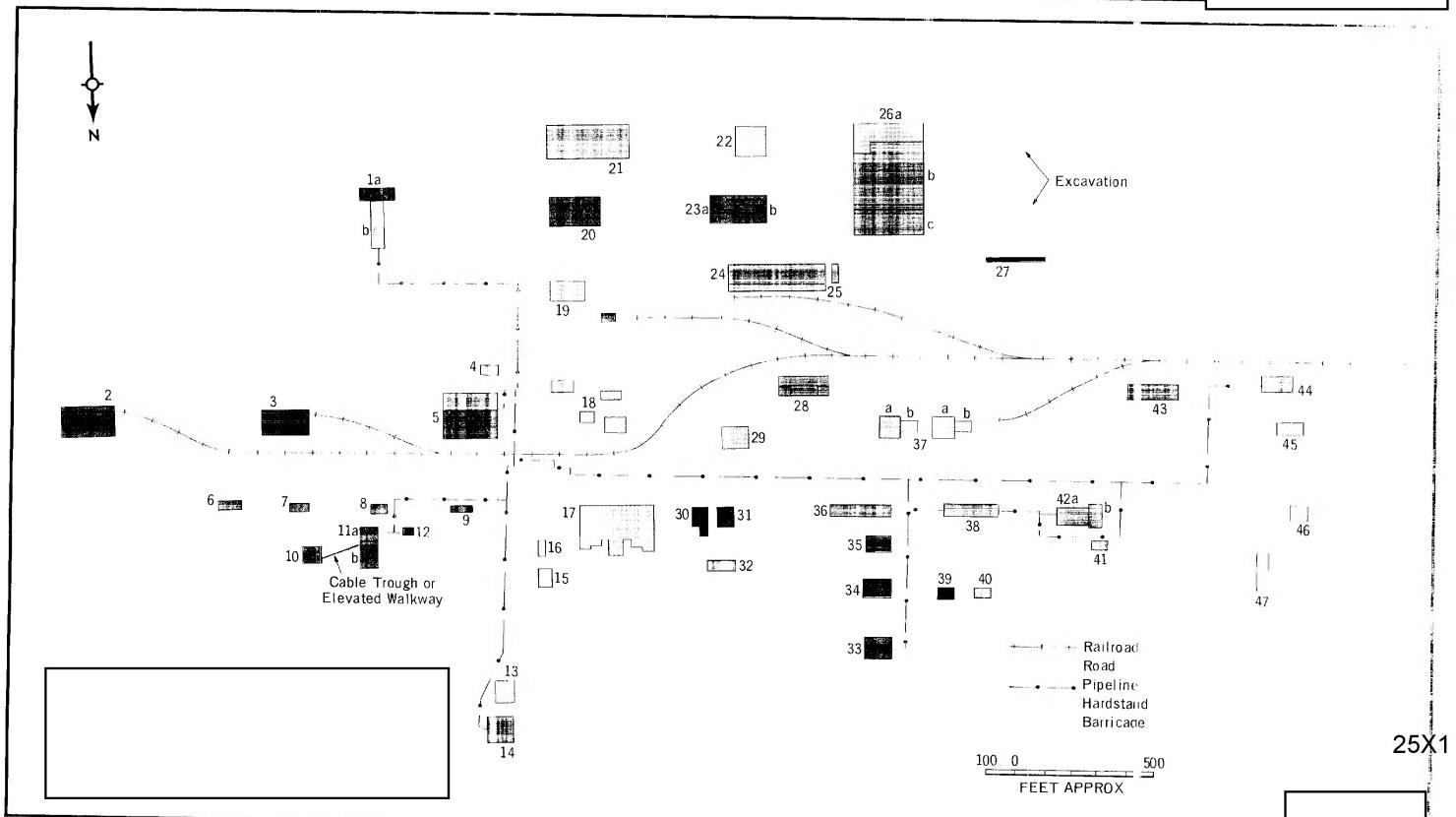


FIGURE 3. ASSEMBLY AND TEST AREA, FAUSTOVO ROCKET ENGINE TEST FACILITY.

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section rises [] above the height of the other section. A pipeline enters the western end of the building. Another pipeline leaves the eastern end of the building and joins a pipeline which bypasses the components test building before entering a long narrow building (item 38, Figure 3).

14. The configuration of the components test building and the pipeline system suggest the function assigned to this building. However, buildings 36, 38, 41, and 42 (Figure 3) may constitute a propellant processing area, with item 42 serving as the primary processing building, and items 36 and 38 serving as final processing buildings or collection points. It is doubtful that any manufacturing of propellants would be accomplished here; the testing nature of the Faustovo installation makes it more likely that any propellant processing is of the blending and mixing nature.

15. The pipeline system also enters the possible calibration test stand (item 11, Figure 3) in the northeastern corner of the assembly and test area. This stand consists of two sections, []

[] A cylindrical object is mounted vertically on the western side of the taller section of the stand and extends from the bottom of the stand to a point above the taller section. The test stand is connected by a cable trough or elevated walkway to a possible control building. The apparent lack of a flame bucket and the proximity of support structures disqualify this structure for engine-firing testing.

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Static Test Pads

16. Three test pads (items 12-14, Figure 4) serve as platforms for static test firings. A protective barricade is southwest of each pad. A high level of activity has been consistently observed on and near the test pads. A test article, or test article and associated apparatus,

[] long, was observed on the western pad (item 14, Figure 4) on []

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Rocket Sled Test Track

17. The rocket sled test track is 2,505 meters []. The presence of a control building and a support area near the western end of the track indicates tests are run in a west to east direction.

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18. Seven instrumentation positions are along the southern side of the track, extending from approximately [] to approximately [] feet) from the eastern end of the track. Several small buildings have been removed since mid-1967 from the track support area.

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Ballistics Test Ranges

19. The ballistics test ranges probably have 11 firing positions for weapons testing. A range of this type would be used to measure the velocity, pressures, and other data relating to various munitions. Evaluation of the weapons for which the munitions are designed might also be accomplished. A laboratory building (item 10, Figure 5) is south of the test ranges firing line. This building is of very heavy construction and may be used for internal ballistics testing.

20. The length of the ranges varies from [] to []. [] Three positions (item 18, Figure 5) are on the []. The easternmost of the three positions has five instrumentation bunkers along the line from the firing position to the impact barricade.

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Support Areas

21. A housing area (Figures 2 and 4) for Faustovo personnel is in the southwestern corner of the facility. The area consists of eight large barracks buildings and 12 smaller units. Three of the small units were added between []

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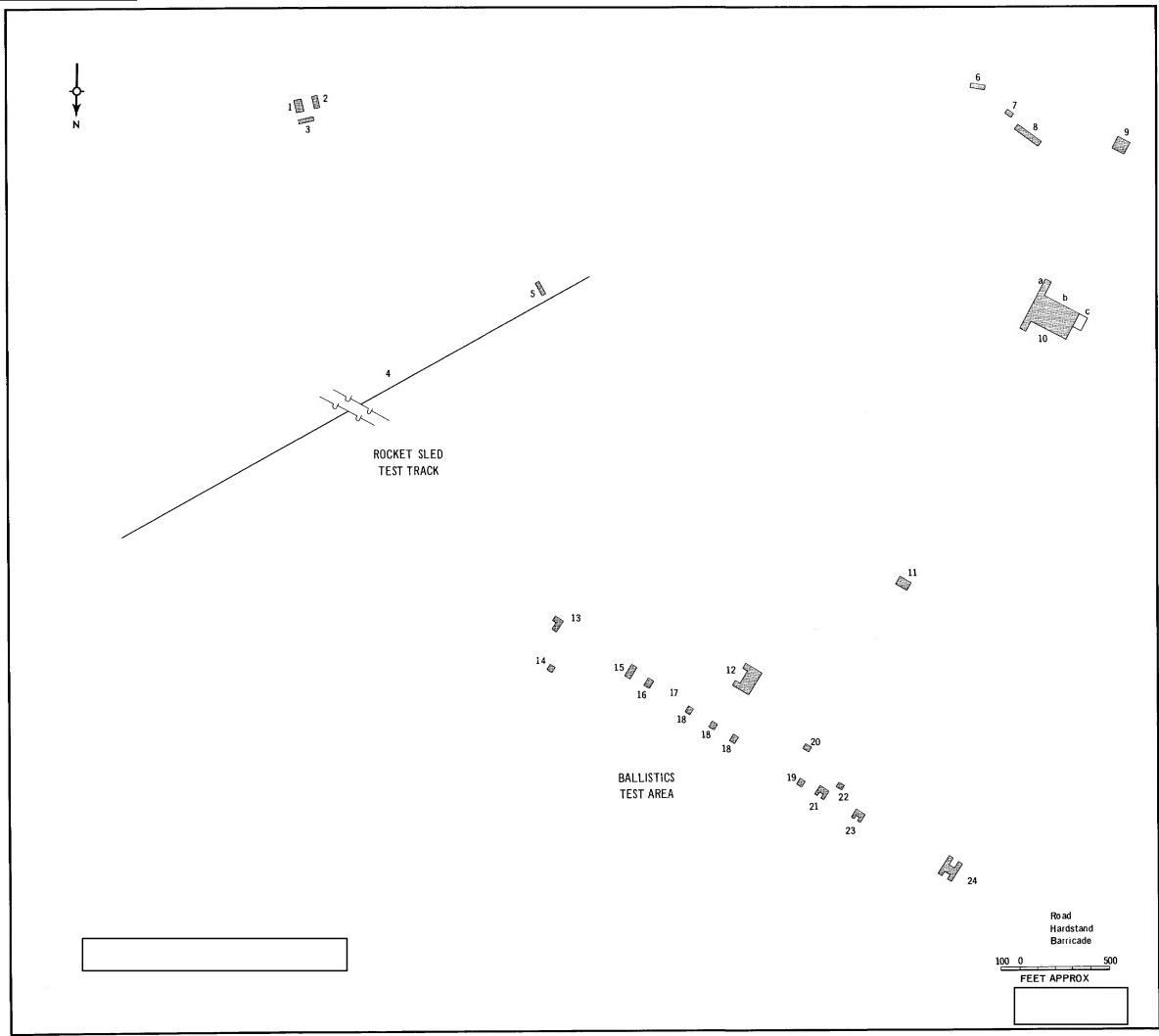


FIGURE 5. BALLISTICS TEST AND ROCKET SLED TRACK AREAS, FAUSTOVO ROCKET ENGINE TEST FACILITY.

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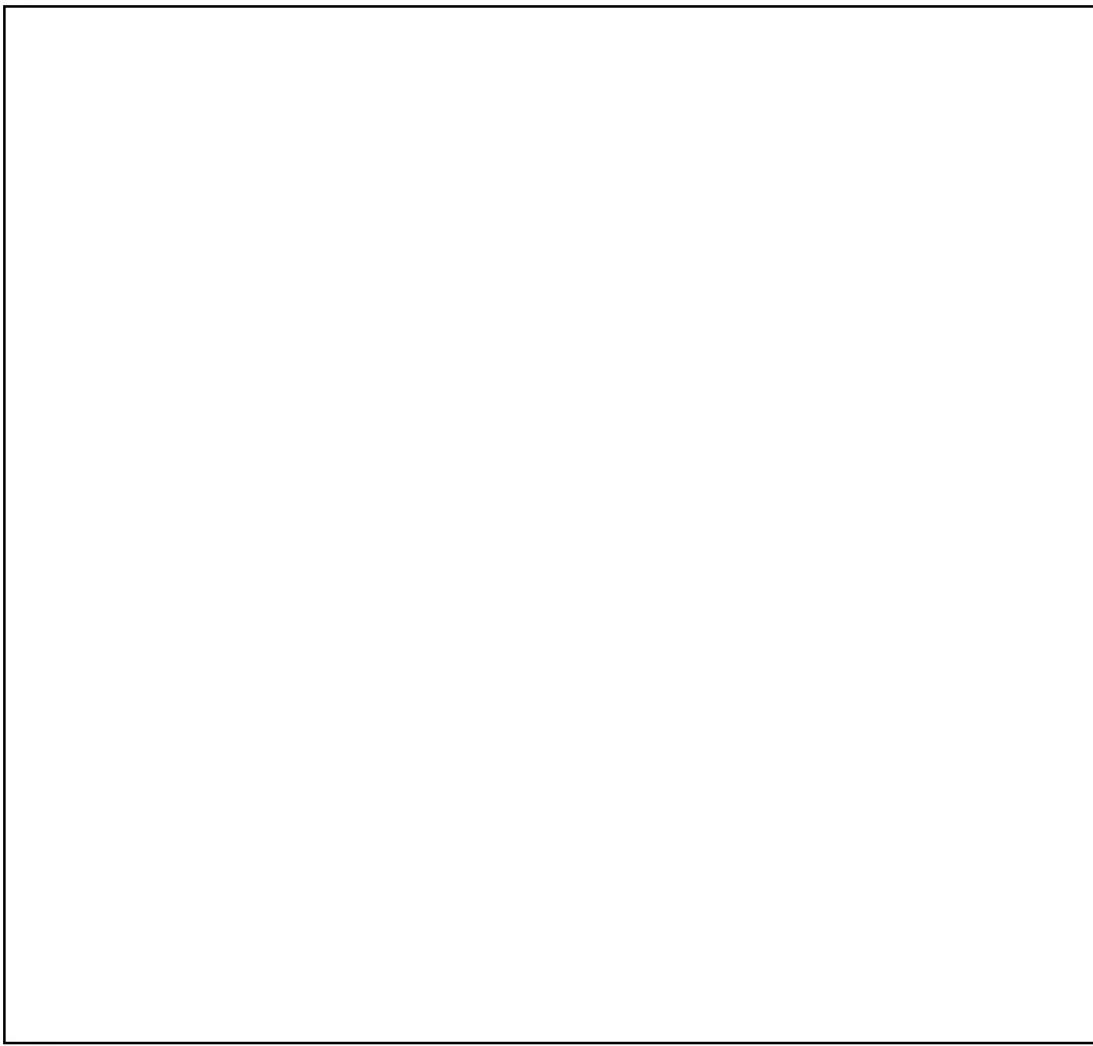
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REFERENCES

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MAPS OR CHARTS

ACIC. US Air Target Chart, Series 200, Sheet 0167-5, scale 1:200,000 (SECRET)

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